

S/019/60/000/024/004/123  
A156/A027

AUTHORS: Davydov, A.B., and Shuralev, V.I.

TITLE: A Device for the Regulation of Cold-Conductivity of Turbodetanders

PERIODICAL: Byulleten' izobreteniy, 1960, No. 24, p. 17


TEXT: Class 17a, 5. No. 134274 (671864/28 of May 30, 1960). 1. The regulation of cold-conductivity is achieved by this device by varying the amount of gas used. For the purpose of diminishing the efficiency factor to a minimum when switching to random operational conditions, the nozzle guide apparatus of this new model is provided with a movable jaw that alters its axial dimension, which has grooves, corresponding to the configuration of blades, installed in the casing on a capping, so that it ensures axial movement with a minimal gap. 2. In this variant there is a worm transmission, intended for smooth regulation of the amount of working gas, the screw of which is rotated by a flywheel, whereas the wheel put on a fixed threaded nave is axially displaced during the rotation, with the displacement trans-

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S/019/60/000/024/004/123  
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A Device for the Regulation of Cold-Conductivity of Turbodetanders

ferred to the jaw. 3. In order to prevent gas from flowing over from the high-pressure area into the low-pressure area through the "covered jaw-housing" communication, this variant is provided with a movable elastic annular diaphragm tightly attached to the housing and to the jaw.



Card 2/2

S/282/63/000/001/007/011  
A059/A126

AUTHOR: Davydov, A.B.

TITLE: The turbine expansion engine ТПР-15 (TDR-15) for the devices  
ВНИИКИМАШ БР-5 (VNIKIMASH BR-5)

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk, 47. Khimicheskoye i kholodil'noye mashinostroyeniye, no. 1, 1963, 49, abstract 1.47.318 (Tr. Vses. n.-i. in-ta kislородn. mashinostr., no. 4, 1961, 26 - 37)

TEXT: A description of the design of a turbine expansion engine is given. The layout of the test stand and test results are presented.

[Abstracter's note: Complete translation]

Card 1/1

S/058/61/000/010/042/100  
A001/A101

AUTHOR: Davydov, A.B.

TITLE: The shape of curves of resonance paramagnetic rotation in hydrated salts

PERIODICAL: Referativnyy zhurnal. Fizika, no.10, 1961, 162, abstract 10V351 (V sb. "Paramagnitn. rezonans", Kazan', Kazansk. un-t, 1960, 153-155)

TEXT: The author studied resonance paramagnetic rotation by the method of turnstile bridge. The shape of resonance paramagnetic rotation curves was investigated in hydrated sulfates of bivalent Mn. With increasing amount of crystallization water in the salts, the curve shape changes from the Lorentz to Gauss shape. A relation is considered between the width  $\Delta H$  of this curve and the lattice constant  $a$ . ✓

L. Sorokina

[Abstracter's note: Complete translation]

Card 1/1

YEPIFANOVA, V.I.; doktor tekhn. nauk; DAVYDOV, A.B., kand. tekhn. nauk

Some results of the studies of turbine expansion engines. Khim.  
i neft. mashinostr. no.6:12-15 D '64 (MIRA 18:2)

DAVIDOV, A.B., kand. tekhn. nauk; KARPENKO, A.S., inzh.

Lengthening the life of the blading of centripetal turboexpanders.  
Trudy VNIIMASH no.8:99-107 '64.

(MIRA 17:0)

15.1120

24067  
S/064/61/000/005/001/003  
B110/B229

AUTHORS: Davydov, A. B., Ivanova, Z. G.

TITLE: Formation of inorganic elemental-organic structures in glue compositions with application of asbestos

PERIODICAL: Khimicheskaya promyshlennost', no. 5, 1961, 44 - 48

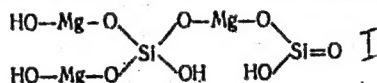
TEXT: In order to improve the mechanical properties, resistance to heat, water, oil, and the coefficient of thermal expansion of adhesives, various fillers are used. The purpose of the present work was to clarify the reaction mechanism between organosilicon and phenol formaldehyde resins and the fillers, and the influence of quantity and properties of the latter on the properties of binding agents. The influence of the fillers on the bonding strength was investigated in overlapping steel samples glued together, which had previously been degreased and sandblast-cleaned. After applying a thin layer of glue to the plates, evacuation and pressing for 2 hr at 250°C by means of a lever press was carried out (7 kg/cm<sup>2</sup>) in order to evaporate the solvent. Organosilicon resin with methyl and phenyl groups were investigated with silicon (resin A), or only with phenyl radi-

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B110/B229

Formation of inorganic...

cals (resin B). In order to increase the bonding strength, phenol formaldehyde resins were added to both. Table 1 shows the results. Composition I consisted of (in parts by weight): resin A = 1. Phenol formaldehyde resin = 1. Hardener = 0.15. Composition II: resin B = 1. Phenol formaldehyde resin = 3. Hardener = 0.45. Addition of fillers caused, apart from decrease of strength, technical difficulties of application as a result of inhomogeneity. Bonding strength, however, resistance to heat, thermal stability, and thermal impact resistance of the resins were increased by asbestos. Chrysolite asbestos, much used in industry, does not change its strength as inorganic polymer of the following structure:

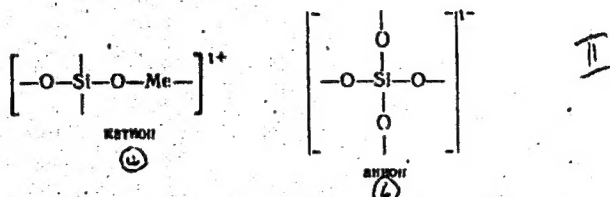


even if heated intensely (1/2 hr at 540°C, a few minutes at 2760°C). The specific surface of dried asbestos amounts to about  $2 \cdot 10^5 \text{ cm}^2/\text{g}$ . The positive and negative ions formed on its surface:

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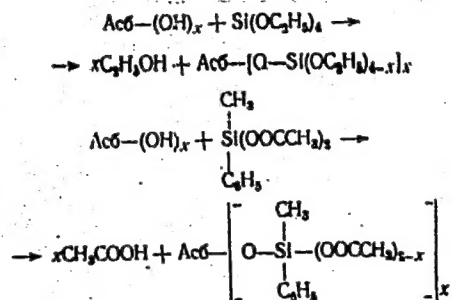
(a = cation, b = anion) act as "active centers" in resin polymerization. The authors investigated the polymerization of resin A with addition of finely ground and sifted asbestos of the type M-5-60 (M-5-60). With growing asbestos content the rate of polymerization was increased. Thermochemical investigations suggested a reaction of orthosilicic acid residues with metal hydroxides (Ca, Cr, Cu, Al, Fe). Thus, reactions with organosilicon resins are possible at the "active centers", above all in the presence of chain fragments. These can arise at a raised temperature, accompanied by separation of methyl and phenyl radicals and fracture of the Si-O-Si bond of polysiloxane. This was pointed out by K. A. Andrianov, M. V. Sobolevskiy (Ref. 10: Vysokomolekulyarnyye kremniyorganicheskiye soyedineniya, Oborongiz, 1949). In order to examine the possibility of binding with the functional alkoxy and acetoxo groups of resin, tetraethoxy

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Formation of inorganic...

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and methyl phenyl diacetoxy silanes were added to asbestos. Asbestos was annealed for 24 hr at 450°C and heated for 1.5 hr at 150°C in vacuo. After filling of the flask with nitrogen, silane was introduced by vacuum distillation. With the heating of the asbestos for 2-4 hr with tetraethoxy silane (150°C), and methyl phenyl diacetoxy silane (180°C), it may be assumed that the following reaction went on:



(As = asbestos)

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Formation of inorganic...

Thus, a formation of inorganic elemental-organic structures may be assumed, which improve the thermomechanical properties (e. g., resistance to heat) of the hardened binding agents. In order to determine the optimum quantity of asbestos in binding agents, asbestos was first ground by ball mills, sifted by sieve no. 100, and added to the resin. The best ratio is 0.75. With regard to fiber length, content of impurities, and dust there are various types of asbestos (Table 4). The tests were carried out with resin A and an asbestos/resin ratio = 0.75. To investigate the optimum compounds of resin and asbestos, the former was treated differently: reduction to small pieces in an aqueous medium (I), exposure to acid II and alkaline solutions (III), and different solvents (IV). For (I) a special container with a perpendicular axis (extension of the electric motor shaft) with four blade knives was used for an intensive fragmentation of the fibers. For (II) the asbestos was added to the graduated solutions in beakers, sucked off and dried after decantation and rinsing. Table 5 shows the results. In (I) the asbestos fiber was heavily destroyed. In (II) the structure of the asbestos was destroyed by substitution. In (III) a gel-like silicic acid was first produced, which, together with the one to be found in the asbestos (2.1%), favors a chemisorption of the resin. ✓

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With a prolonged alkali treatment  $\text{SiO}_2$  is dissolved whereby chemisorption is reduced. Degreasing by acetone (IV) increases the bonding strength slightly at room temperature but not at  $425^\circ\text{C}$ . There are 1 figure, 5 tables, and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The three references to English-language publications read as follows: Ref. 2: Modern Plastics, 35, No. 10, 105, 218 (1958); Ref. 3: Plastics World, 16, No. 3, 7 (1958); Ref. 4: British Plastics, 31, No. 11, 452, 495 (1959).

Table 1. Influence of fillers on the strength of glue compounds.

Legend: 1) Filler; 2) quantity, parts by weight; 3) shear strength limit in  $\text{kg/cm}^2$  for; 4) composition I; 5) without filler; 6) potash mica; 7) Al + fused alumina; 8) asbestos M-5-60; 9) composition II; 10) the laminae were not glued together.

Card 6/9

DAVYDOV, A.B., inzh.; YEPIFANOVA, V.I., kand. tekhn. nauk

Evaluating the efficiency of turbo-expanders in large plants  
for the production of gaseous oxygen. Trudy VNIIMASH  
no.5:3-29 '62. (MIRA 18:3)

DAVYDOV, A.B., inzh.; YEPIFANOVA, V.I., kand.tekhn.nauk

Comparing various methods for the control of the refrigerating capacity of turboexpanders in low pressure oxygen plants.

Khim.mash. no.4:13-16 J1-Ag '62.

(MIRA 15:7)

(Oxygen) (Refrigeration and refrigerating machinery)

DAVYDOV, Aleksandr Sergeyevich; VIRKO, I.G., red.; PLAKSHE, L.Yu.,  
tekhn. red.

[Quantum mechanics] Kvantovaya mekhanika. Moskva, Gos.  
izd-vo fiziko-matem. lit-ry, 1963. 748 p. (MIRA 16:7)  
(Quantum theory)

SOLODOVNIK, V.D.; DAVIDOV, A.B.; IVANOVA, Z.G.; MINDLIN, Ya.I.;  
LEZNOV, M.S.

Properties of and the possibility of using organoborosilicon  
polymers as components of heat-resistant adhesives. Plast.  
massy no.3:39-42 '63. (MIRA 16:4)

(Adhesives) (Silicon organic compounds)  
(Boron organic compounds)

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED  
DATE 01-23-2009 BY 60322 UCBAW

HEAT-RESISTANT ORGANOSILICON ADHESIVES BK-2 AND BK-6 (USSR)

Ivanova, Z. G., and A. B. Davydov. Plasticheskiye massy, no. 4, 1963, 37-39.  
S/191/63/000/004/008/015

A description is given of a study of the physical and mechanical properties of adhesive joints formed by the asbestos-filled adhesives BK-2 and BK-6, based on organosilicon and modified-organosilicon resins, respectively. The tests were conducted with such materials as steels 30X1CA and 30X15, Ti alloy BT-4, glass-reinforced plastic BPT, and steel 30X1CA plus graphite. The highest bond strength is attained by joining the parts at 270°C for 3 hrs. The joints have a shear strength of 15 to 30 kg/cm<sup>2</sup> at 1000°C and withstand temperatures of 350 to 425°C and, for a short time, even of 1000°C. Joints formed by BK-2 can withstand service for several hours at 1000°C under a shear stress of 10 kg/cm<sup>2</sup>, and joints with BK-6, 1000 hrs at room temperature under a shear stress of 108 kg/cm<sup>2</sup>. At 425°C the joints withstand 3.10<sup>6</sup> cycles of a 35-kg/cm<sup>2</sup> load and 15 to 20 (BK-2) or 5 (BK-6) thermal cycles (from -60 to 425°C). The joints resist tropical conditions, liquid hydrocarbons (5 days), and water (15 days). The failure of bonded nonmetallic materials at high temperatures is cohesive. Joints formed by BK-6 exhibit at room temperature properties superior to those with BK-2.

(BAO)

[BAO]

Card 1/1

DAVYDOV, A.B. (Moskva); VALOVOY, V.A. (Moskva)

Thermal and thermooxidative degradation of compositions based on  
organosilicon resins. Teplofiz. vys. temp. 2 no.1:102-107 Ja-F  
'64. (MIRA 17:3)

DAVYDOV, A.B.; TSIDIL'KOVSKIY, I.M.

Study of magnetoresistance at superhigh frequencies. Prib. i  
tekh. eksp. 9 no.3:172-174 My-Je '64 (MIRA 18:1)

1. Institut fiziki metallov AN SSSR.

L 236h2-65 ENT(m)/EPP(o)/EWP(j)/T Po-4/Pr-4 RM

ACCESSION NR: AP5002329

8/0191/65/000/001/0046/0048

AUTHOR: Davydov, A. B.; Ivanova, Z. G.

TITLE: Preliminary treatment and sorption properties of asbestos used as a filler in plastics

SOURCE: Plasticheskiye massy, No. 1, 1965, 46-48

TOPIC TAGS: asbestos, plastic filler, chemisorption, silicoorganic compound, polymethylphenyl siloxane, tetraethoxysilane, polymer swelling, asbestos settling, asbestos swelling

ABSTRACT: The sorptive and chemisorptive processes in asbestos and the effect of preliminary treatment of this material were studied. The effect of preliminary mechanical treatment on the state of the filler surfaces was first determined, along with the settling volume of asbestos samples in water. The swelling kinetics of an asbestos subjected to mechanical treatment in ball and vibration mills are depicted graphically. The data show that the settling volume reaches a maximum in the majority of cases after the asbestos has been kept in water for 5-10 hours. Preliminary treatment also has a noticeable effect on the volume of asbestos colloidal settling; the dependence of the maximum settling volume of an asbestos sample on pulverizing time is shown. These data prove that the settling volume reaches a maximum during the pulverizing of asbestos in ball

Cord 1/2

L 23642-65

ACCESSION NR: AP5002823

mills for 12-15 hours. The effect of thermal treatment of asbestos on its swelling was also investigated, and it is noted that heat treatment can significantly activate fiber surfaces. The reaction of asbestos with silicoorganic compounds and polymethylphenyl siloxane resins was studied, showing that the type of asbestos and the nature of its treatment has a marked effect on the kinetics and absorption of silicoorganic compounds. A soft asbestos has a large sorptive capacity, and thermal treatment increases its sorptive power. The sorption of tetrathoxysilane exceeds the sorption of polymethylphenyl siloxane by a factor of two. Absorbed substances are completely removed from asbestos by extraction with appropriate solvents; this demonstrates the sorptive character of the absorption. Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 009

OTHER: 003

Card 2/2

L 47340-65 EPF(c)/EPR/EWF(j)/EWT(m)/I/EWP(v) Pc-4/Pr-4/Ps-4 RM/KW  
 S/0191/65/000/004/0072/0074

ACCESSION NR: AP5009327

AUTHORS: Davydov, A. B.; Ivanova, Z. G.

TITLE: Means of lowering the hardening temperature of heat resistant organosilica cements

SOURCE: Plasticheskiye massy, no. 4, 1965, 72-74

TOPIC TAGS: cement, glue welding, adhesion, adhesive bonding, adhesive material/  
 ZOKhGSA steel, VK2 cement, 588 cement

ABSTRACT: The effect of various catalytic additives on the hardening properties of cement-glue compositions was studied in relation to hardening temperature. The catalytic agents (tetraethoxysilane (TES), potassium acetate, product "18," glass silicate, and others) were tested for their effect on the deflection strength of ZOKhGSA steel at room temperature and at 425°C. The parent cement compositions tested were of types VK-2 and "588." Strength and hardening data for these cements are given in Fig. 1 on the inclosure. Tests were executed as follows: the catalysts were added to the parent cements in measured quantities, after which the mixtures were applied to a steel joint and hardened at a controlled temperature. The joint strength was then tested at room temperature and at 425°C, after which the observed strength value was plotted versus the percentage of catalyst used. Additional tests

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L 47340-65

ACCESSION NR: AP5009327

were performed to study the effect of introducing small quantities of finely ground glass on the hardening (at 200C) characteristics of organosilica resins. It was observed that the addition of 1% (dry weight) of ground glass to composition "586" effectively lowers the hardening temperature to 200C. Orig. art. has 2 tables and 5 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SUB CODE: MP

NO REF SOV: 003

OTHER: 001

Card 2/3

DAVYDOV, A.B., kand. tekhn. nauk; YEPIFANOVA, V.I., doktor tekhn. nauk

Experimental study of a radial flow turboexpander with partial  
gas supply. Trudy VNIIMASH no.9:111-124 '65.

(MIRA 18:6)

L 2165-66 EWT(m)/EPF(c)/EWP(v)/EWP(j)/T WW/DJ/WE/RM

ACCESSION NR: AP5024512/

UR/0191/65/000/010/0056/0057  
678.842:668.395.6

AUTHOR: Ivanova, Z. G.; Davydov, A. B.

TITLE: Thermostability of adhesive VK-8 having increased strength and elasticity

SOURCE: Plasticheskiye massy, no. 10, 1965, 56-57

TOPIC TAGS: heat resistance, heat property, adhesive, adhesion, shear stress, impact stress, atmospheric humidity

ABSTRACT: The thermomechanical properties of VK-8 were examined to determine its suitability as an adhesive. Its shear strength compares favorably with that of adhesives VK-2 and VS-350 up to 350 C, but exceeds that of VS-350 and is less than that of VK-2 at higher temperatures to 1000 C. The cleavage and impact strengths of VK-8 are far superior to those of the other two adhesives. VK-8 may be used for bonding metallic and nonmetallic materials. It is resistant to mineral oil MK-8, fuel T-1, and gasoline. Its strength remained unchanged under tropical conditions for one month and is affected little by water. It does not

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L 2165-66

ACCESSION NR: AP5024512

corrode unprotected steel. Application in two layers is recommended-- the first layer to be held at room temperature for 1 hour and the second layer to be held at room temperature for one hour and at 60 C for 30 minutes. The material is then cured in 3 hours at 200 C under 3-5 kg/sq. cm. pressure

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NR REF SOV: 003

OTHER: 000

Cord 2/2 *dy*

DAVYDOV, A.B., kand.tekhn.nauk; PROKHOROV, V.I., inzh.

Air-cooling machines in the air-conditioning systems.  
Vod.1 san.tekh.no.4:26-29 Ap '65.

(MIRA 19:1)

L 23324-66 EWT(m)/ENP(w)/EWP(f)/EWP(v)/T-2/EWP(k)/ETC(m)-6 IJP(c) WW/EM  
 ACC NR: AP6006314 (N) SOURCE CODE: UR/0413/66/000/002/0031/0031

AUTHOR: Davydov, A. E.

ORG: none

TITLE: Device for stabilizing the rotors of high-speed turbomachines. Class 14,  
 No. 177904

SOURCE: Izobreteniya, promyshlennyye obraztsey, tovarnyye znaki, no. 2, 1966, 31

TOPIC TAGS: turbine, turbine rotor, stabilization

ABSTRACT: An Author Certificate has been issued for a device for stabilizing the  
 rotors of high-speed turbomachine engines with sliding bearings. Stability is  
 increased by electromagnets mounted in the housing, which have a unidirectional  
 effect on the rotor (See Fig. 1). Orig art. has: 1 figure. [LD]

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UDC: 621.165-251-752.3

L 23324-66

ACC NR: AP6006314

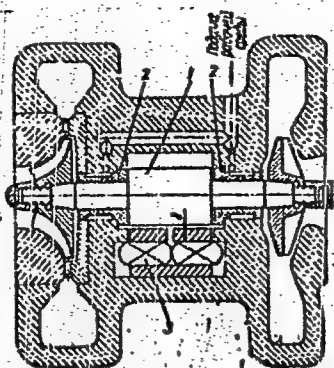


Fig. 1. Stabilizing rotor

1 - rotor; 2 - sliding bearing; 3 - electromagnets

SUB CODE: 10/

SUBM DATE: 13Apr63/

ORIG REF: none/

OTH REF: none/

Card 2/2

L 37218-66 EWP(j)/EWT(m)/T/EWP(v) IJP(c) RM/WW/JWD

ACC NR: AP6018128

(A)

SOURCE CODE: UR/0191/66/000/006/0046/0048

AUTHOR: Zalikin, A. A.; Davydov, A. B.; Strepikeyev, Yu. A.; Ivanova, Z.G.

ORG: none

TITLE: Use of polycyclic polyisocyanates as components in cold curing adhesive compositions

SOURCE: Plasticheskiye massy, no. 6, 1966, 46-48

TOPIC TAGS: isocyanate resin, polyester plastic, adhesive, adhesion, heat resistance

ABSTRACT: The possibility of using polycyclic polyisocyanates (A) in adhesives that will cure without heat to attain improved heat stability was investigated. A, made of aniline, o-toluidine, or o-chloroaniline with formaldehyde, were used as 50% acetone or toluylene diisocyanate solutions. To prepare the adhesive various polyesters were added, also as 50% acetone solutions or as powders. The components were mixed, catalyzed with a 5% aqueous potassium methacrylate solution, mixed again and spread onto steel or duralumin surfaces 30-40 minutes later. Bond strength and heat stability depended on the composition of the polyisocyanate, increasing with increase in its molecular weight and

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UDC: 678.664.668.395.6

L 37218-66

ACC NR: AP6018128

number of NCO- groups. Physical mechanical properties of the adhesive and its bond strength at room temperature and at 150-200°C also improved with increase in curing time. With cementing temperatures of 60-120°C the same bond strength was attained in 2 hours as when curing at room temperature for 10 hours. Bond strength also depended on surface preparation--best adhesion was obtained with freshly sandblasted surfaces. Orig. art. has: 6 tables.

SUB CODE: 07,11/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 009

*ms*  
Card 2/2

BOGUSLAVSKIY, Viktor Petrovich, kand. tekhn. nauk; ~~DAVIDOV, Andrey~~  
~~Dmitriyevich~~; KHRUPPA, Ivan Fedorovich; PETROV, I.F., red.;  
MEL'NIKOV, V.I., tekhn. red.

[Irrigation of vegetable crops in suburban zones] Oroshenie ovoshch-  
nykh kul'tur v prigorodnoi zone. Omsk, Omskoe knizhnoe izd-vo, 1960.  
67 p. (MIRA 14:12)

(Vegetables—Irrigation)

DAVIDOV, Aleksandr Davidovich; MOISEYEV, P.P., otv. red.; POLTAVSKAYA,  
S.V., red. izd-va; MIKHLINA, L.T., tekhn. red.

[Development of capitalist relations in the agriculture of  
Afghanistan] Razvitie kapitalisticheskikh otnoshenii v zemle-  
delii Afganistana. Moskva, Izd-vo vostochnoi lit-ry, 1962.  
162 p. (MIRA 15:3)  
(Afghanistan--Agriculture--Economic aspects)

DAVYDOV, A. D.

Dissertation defended for the degree of Candidate of Economic Sciences at the  
Institute of the Peoples of Asia.

"Development of Capitalist Relations in the Agriculture of Afganistan."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

KOPYRIN, V.I., prof.; DAVYDOV, A.D.

Use of floodplain meadows. Zemledelie 27 no.2:42-44 P. 65.  
(MIRA 18:4)

1. Omskiy sel'skokhozyaystvennyy institut.

DAVIDOV, A.P.

Motor activity of reindeer in relation to grazing conditions. Opyt  
izuch.reg.fiziol.funk. 4:21-28 '58. (MIRA 12:4)

1. Laboratoriya ekologicheskoy fiziologii (zavednyushchiy - prof.  
A.D. Slonim) Instituta fiziologii imeni I.P. Pavlova AN SSST i Otdel  
zhivotnovodstva (zavednyushchiy - S.P. Popov) Instituta sel'skogo  
khozyaystva Kraynego Severa.

(REINDEER)

(GRAZING)

DAVIDOV, A.F.

~~Investigation of motor activity in farm animals.~~ Fiziol. zhur.  
44 no.3:264-265 Mr '58. (MIRA 11:4)

1. Institut sel'skogo khozyaystva Kraynego Severa, Leningrad.  
(MUSCLES, physiology  
motor activity in farm animals, measurement (Rus)  
(ANIMALS,  
farm animals, measurement of motor activity (Rus)

DAVYDOV, A. F., Cand Biol Sci (diss) -- "An investigation of the motor activity and pasture conditions of northern deer". Leningrad, 1960. 19 pp (Acad Sci USSR, Inst of Physiology im I. P. Pavlov), 250 copies (KL, No 12, 1960, 126)

DAVYDOV, A.F.

Regimen of muscular activity in reindeer during the procurement of food from under the ice. Opyt izuch. reg. fiziol. funk. 6: 35-40 '63. (MIRA 17:3)

Electrophysiological study of various muscles in hedgehogs. Ibid.:41-48

1. Laboratoriya ekologicheskoy fiziologii (zav. - prof. A.D. Instituta fiziologii imeni Pavlova AN SSSR i Institut sel'skogo khozyaystva Kraynego severa Ministers'tva sel'skogo khozyaystva RSFSR (dir. N.O.D'yachenko).

OL'NYANSKAYA, R.P.; DAVYDOV, A.F.; ROMANOVSKAYA, G.D.

Materials on the physiology of acclimatization of sheep in the mountains of the Northern Caucasus. Opyt izuch. reg. fiziol. funk. 6:78-84 '63 (MIRA 17:3)

1. Gruppya fiziologii gazoobmena i teploobmena i laboratoriya ekologicheskoy fiziologii (zav. - prof. A.D. Slonim) Instituta fiziologii imeni Pavlova AN SSSR.

IVANOV, K.P.; DAVYDOV, A.F.

Physiological mechanism of chemical thermoregulation in bats.  
Opyt. izuch. reg. fiziol. funk. 6:179-183 '63 (MIRA 17:3)

1. Laboratoriya ekologicheskoy fiziologii (zav. - prof. A.D. Slonim) Instituta fiziologii imeni I.P.Pavlova AN SSSR.

L 22339-66

ACC NR: AP6004834 (N) SOURCE CODE: UR/0239/65/051/010/1238/1243 8

AUTHOR: Davydov, A. F.; Sklyarchik, Ye. L. B

ORG: Ecological Physiology Laboratory of the Physiology Institute im. I. P. Pavlov AN SSSR, Leningrad (Laboratoriya ekologicheskoy fiziologii Instituta fiziologii AN SSSR/

TITLE: Regulation of respiration and gas exchange in young Greenland seals in relation to underwater submersion

SOURCE: Fiziologicheskii zhurnal SSSR, v. 51, no. 10, 1965, 1238-1243

TOPIC TAGS: experiment animal, animal physiology, biologic respiration

ABSTRACT: Dependence of oxygen deficit of seals on duration of the underwater submersion period, and also the period required to restore oxygen consumption to its initial level, were investigated. Experiments were conducted on 12 young Greenland seals ages 2 days to 2 mon aboard the icebreaker "Yermak" in the White Sea in March 1963 and experiments were continued on 3 of the animals at a Moscow laboratory. Underwater submersion of seals was staged in a tank filled with sea water warmed to temperatures which would not cause any gas exchange shifts higher than 5 to 10% over a 3 to 40 min period. Water temperature for the youngest

Card 1/2

UDC: 612.614.41+612.27 2

L 22339-66

ACC NR: AP6004834

0

group of seals was 25 to 26°, temperature for slightly older seals was 17 to 18°, and the temperature for the oldest seals was 11 to 12°. The seals were allowed to rest on their backs on the water for 10 to 15 min prior to submersion. The seals were lowered into the tank on a special stand in which the front and back flippers and head were free to move. Respiration and gas exchange were investigated according to Douglas and Holden's methods (not described). The youngest seals were submerged for 1 and 3 minute periods and older seals were submerged for periods up to 10 min. The oxygen demand of the youngest seals was reduced (51 to 83%) with 1 and 3 minutes of submersion, while that of the older seals was increased (108 to 160%) for corresponding periods. The oxygen demand of older seals was sharply reduced (43 to 66%) with prolonged submersion of 5 to 10 minutes. Maximum compensation (70 to 80%) for oxygen deficit occurred during the first minute for all seal age groups regardless of submersion period duration, and the oxygen consumption level was completely restored within the first 3 minutes. However, the level of carbon dioxide given off by the seals was restored to normal in only about 10 minutes. Increased lung ventilation due to increased respiration frequency and respiration volume appears to be the main mechanism responsible for rapid supply of oxygen in seals following submersion. Orig. art. has: none.

SUB CODE: 06/ SUBM DATE: 05Jun64/ ORIG REF: 004/ OTH REF: 006

Cord 2/2dd

DAVYDOV, A. G.

Davydov, A. G. - "Burning out left-over herbaceous vegetation as a method of improving meadows," Trudy Buryat-Mongol. sovet, in-ta, Issue 4, 1949, p. 116-24 - Bibliog: 9 items.

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

DAVYDOV, A.I., inzh.; VIAZNIKOV, A.K., inzh.

New pickup balers. Trakt. i sel'khozmas h no. 6:34-37 Je '58.  
(MIRA 11:7)

(Hay--Harvesting)

30855. DAVYDOV, A. K.

Osnovy matematicheskoy teorii tkatskikh perepleteniy: Nauch. - issled  
trudy (Kostrom. tekstil. in-t), vyp. 8, 1949, s. 31-52.

DAVIDOV, Aleksey Iosifovich; BODROVA, A., red.; PALAMARCHUK, T., red.; LEV-  
CHENKO, O., tekhn. red.

[The growth and rapid development of the socialist city of Kiev]  
Roste i kvitne sotsialistychnyi Kyiv. Kyiv, Derah. vyd-vo polit.  
lit-ry URSR, 1961. 133 p. (MIRA 14:8)  
(Kiev--Description) (Kiev--Economic conditions)

KHRYASHCHEVA, N.K., inzh.; Primal uchastiye DAVYDOV, A.I.

Contact welding of alloyed steel rails. Trudy TSNII MPS no.260:  
82-101 '63. (MIRA 16:11)

DAVIDOV, Aleksandr Konstantinovich

[Problems in algebra and elementary functions] Sbornik  
zadach po algebre i elementarnym funktsiiam. Posobie dlia  
uchitel'skikh i pedagogicheskikh institutov. Moskva,  
Gos.uchebno-pedagog. izd-vo, 1955. 247 p. (MIRA 16:12)  
(Algebra—Problems, exercises, etc.)  
(Functions)

DAVYDOV, Aleksandr Konstantinovich; NEMTSOVA, L.G., red.; MAKHOVA,  
N.M., tekhn.red.

[Collected problems in algebra and elementary functions; for  
pedagogical institutes] Sbornik zadach po algebre i elemen-  
tarnym funktsiiam; dlia pedagogicheskikh institutov. Izd.2.,  
perer. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR,  
1959. 151 p. (MIRA 12:10)  
(Algebra--Problems, exercises, etc.) (Functions)

DAVYDOV *Alks. and L. V. Volsky*

7

Photometric method for determining columbium in steel. A. I. Davydov, Z. M. Valsberg, and L. R. Burkner. *Zashchita Laz.* 13, 1033-43(1947).—The blue complex of Co with phosphomolybdate is most intense when the soln. is 0.4-0.7 N in  $H_2SO_4$ ; the color is independent of the excess of  $SnCl_2$  used; phosphate above 0.05 mg. does not affect the color intensity (below that, the color is weaker). The following procedure is recommended. Digest 0.1 g. of steel with 5 ml. of 8 N  $H_2SO_4$  soln. and heat until dissolved. Add 0.2 ml. of concn.  $HNO_3$  and 5 ml. of 2% HF. Boil 10 min., dil. with 10 ml. of 8 N  $H_2SO_4$ , and add 25 ml.  $H_2O$ . Make up to 50 ml. and transfer a 5-ml. aliquot to a 50-ml. volumetric flask, mix with 2 ml.  $NaH_2PO_4$  soln. (0.6 g. per liter), 14 ml. water, and 4 ml. 2%  $(NH_4)_2MoO_4$  soln. Heat to 30° and after 15 min. add 20 ml. of 6 N  $H_2SO_4$  (to prevent reduction of molybdate). Wait 30 sec. and add 4 ml. 0.5%  $SnCl_2$  soln. Dil. to 50 ml. and measure the color in a photometer against the standard. Mn, Cr, Ni, Si, and C do not affect the result which will agree within 0.01-0.02% of the truth. G. M. Kneeland

ASTM 35.4 METALLURGICAL LITERATURE CLASSIFICATION

ASTM 35.4 METALLURGICAL LITERATURE CLASSIFICATION

ASTM 35.4 METALLURGICAL LITERATURE CLASSIFICATION

DAVIDOV, A.M.

State of electric ocular sensibility in different periods of hypertension. Klin.med., Moskva 28 no.12:58-60 Dec 50.(GIML 20:5)

1. Of the Department for the Diagnosis, Special Pathology, and Therapy of Internal Diseases (Head--Prof.M.A.Volin),Therapeutic Faculty of Second Moscow Medical Institute imeni I.V.Stalin.

DAVYDOV, A.M.

~~PERSONAL~~  
Vestibular electrostimulation in various stages of hypertension.  
Ter. arkh., Moskva 24 no. 3:22-30 May-June 1952. (GIML 22:4)

1. Candidate Medical Sciences. 2. Of the Department of Diagnosis,  
Special Pathology, and Therapy of Internal Diseases (Head -- Prof.  
M. A. Volin), Therapeutic Faculty of Second Moscow Medical Institute  
imeni I. V. Stalin.

DAVYDOV, A. M. Doc Med Sci -- (diss) "Tonus and vascular permeability during hypertonia." Mos, 1957. 17 pp 20 cm.

(~~The~~ First Moscow Order of Lenin Medical Inst im I.M. Sechenov),  
200 copies

(KL, 21-57, 105)

-90-

USSR / Cultivated Plants. General Problems.

M-1

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58492

Author : Davydov, A. M.

Inst : Not given

Title : The Successful Development of Crop Rotations in UzbekSSR

Orig Pub : Sots. s.-kh. Uzbekistana, 1957, No 12, 63-69

Abstract : No abstract given

Card 1/1

DAVYDOV, A.M., kand. med. nauk

Dynamics of venous pressure and circulation rate in the clinical treatment of hypertension. Terap. arkh. 29 no.7:66-70 J1 '57.

(MIRA 11:4)

1. Iz Moskovskoy gorodskoy bol'nitsy No.13 (glavnyy vrach A.M. Krichevskiy)

(HYPERTENSION, physiology,  
venous pressure & circ. rate (Rus))

NIKOLAYEVSKIY, Ye.Ya., inzh.; EYDEL'NANT, L.B., inzh.; DAVYDOV, A.M.,  
inzh.; SIMACHEV, L.V., red.; BATECHUK, A.M., inzh., red.; IPATOV,  
P.P., inzh., red.; KRYLOV, V.A., inzh., red.; PELESHUK, M.I.,  
inzh., red.; PETERSKOV, N.I., red.; SHUBOV, L.B., red.

[Instructions for industrial safety measures in the assembly of  
technological equipment and piping] Instruktivnye ukazaniia po  
tekhnike bezopasnosti pri montazhe tekhnologicheskogo oboru-  
dovaniia i truboprovodov. Izd.2., perer. i dop. Moskva, TSentr.  
biuro tekhn.informatsii, 1959. 160 p. (MIRA 13:6)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Glav-  
metallurgmontazh. 2. Glavnyy inzhener Glavmetallurgmontazha  
Ministerstva stroitel'stva RSFSR (for Simachev).  
(Industrial safety)

DAVYDOV, A.M., dotsent

Temporal pressure in the clinical aspects of hypertension.  
Zdrav.Heloz. 5 no.6:22-25 Je '59. (MIRA 12:9)

1. Iz fakul'tetskoy terapevticheskoy kliniki Vitebskogo  
meditsinskogo instituta.

(HYPERTENSION)

(TEMPORAL ARTERY)

DAVYDOV, A.M., dotsent

Permeability and resistance of capillaries in hypertension.  
Zdrav.Belor. 5 no.8:17-18 Ag '59. (MIRA 12:10)

1. Iz kafedry fakul'tetskoy terapii Vitebskogo meditsinskogo  
instituta.

(HYPERTENSION) (CAPILLARIES--PERMEABILITY)

DAVYDOV, A.M.

Automatic switch for multiple-point tension measurements. Izv.  
tekh. no.1:20-22 Ja '60. (MIRA 13:5)  
(Electric switchgear)

DAVYDOV, A.M., doktor med.nauk

Acute and chronic enterocolitis. Zdrav. Bel. 7 no.10:61-64 0 '61.  
(MIRA 14:11)

(INTESTINES—DISEASES)

S/032/62/028/001/016/017  
B116/B108

AUTHORS: Bershak, V. I., Gudimenko, A. I., Davydov, A. M.

TITLE: Molybdenum disilicide heaters for high-temperature laboratory furnaces

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 1, 1962, 115

TEXT: The new molybdenum disilicide heaters described here can be used at higher temperatures (characteristic temperature  $1700^{\circ}\text{C}$ ) and have a much longer service life than silicon carbide heaters. Of the various heating elements that were tested, the one shown in the accompanying figure is recommended for laboratory furnaces (both for crucible and tubular furnaces). It has the following advantage over conventional heating elements: The bus bars and the cooling system of the contacts are mounted on the side surface of the furnace, which is particularly convenient if the distance between the furnace lid and the maximum-temperature zone is to be as small as possible. The heating element presented here was developed according to the authors' design at the Kombinat tverdykh splavov (Combine of Hard Alloys) in Moscow. With four

Card 1/3

Molybdenum disilicide heaters...

S/032/62/028/001/016/017  
B116/B108

such elements connected in parallel, the amperage is 1200 a, and the voltage (at 1600°C in the center of the furnace) is 14 v. The furnace is fed by a 220-v mains supply using АОСК-10/0.5 (AOSK-10/0.5) auto-transformers. A furnace with molybdenum disilicide heating elements has been in operation at the Gintsvetmet for one and a half years, and no replacement of the heating elements has yet been necessary. Compared with furnaces equipped with molybdenum or tungsten heating elements, this type is more simply designed and operates in any atmosphere except one saturated with SO<sub>2</sub> vapor. [Abstracter's note: Essentially complete translation.] There is 1 figure.

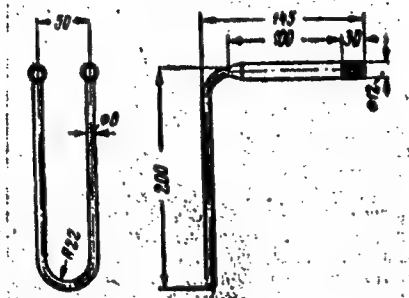
ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut  
tsvetnykh metallov (State Scientific Research Institute  
of Nonferrous Metals)

Fig. Molybdenum disilicide heating element.  
Dimensions in mm.

Card 2/3

Molybdenum disilicide heaters...

S/032/62/028/001/016/017  
B116/B108



Card 3/3

MAKAROV, A.F.; OBOROTOV, I.Ye.; KALYADIN, I.I.; FELENKO, L.I.; PEREPELITSA,  
V.R.; NECHAYEV, B.N.; DAVIDOV, A.M.; IVANOV, N.G.; CHUVAKOV, P.F.;  
FIL'KOV, P.V.; LAR'KIN, G.D.; SVYATKIN, V.V.; SHARIFULLIN, M.

Railroad workers address metallurgists. Put' i put.khoz. 4  
no.8:14 Ag '60. (MIRA 13:8)

1. Kovylninskaya distantziya puti i putevaya mashinnaya stantsiya  
No.66, stantsiya Kovylnino, Kuybyshevskoy dorogi. 2. Nachal'nik  
Kovylninskoy distantzii puti (for Makarov). 3. Sekretari  
partburo, stantsiya Kovylnino, Kuybyshevskoy dorogi (for Oborotov,  
Nechayev). 4. Predsedatel' mestkoma, stantsiya Kovylnino,  
Kuybyshevskoy dorogi (for Kalyadin). 5. Sekretari Vsesoyuznogo  
Leninskogo kommunisticheskogo soyuza molodezhi, stantsiya  
Kovylnino, Kuybyshevskoy dorogi (for Felenko, Ivanov). 6. Nachal'-  
nik putevoy mashinnoy stantsii No.66, stantsiya Kovylnino,  
kuybyshevskoy dorogi (for Perepelitsa). 7. Chlen mestkoma, stantsiya  
Kovylnino, Kuybyshevskoy dorogi (for Davydov). 8. Rukovoditeli  
brigad i udarniki kommunisticheskogo truda distantzii i putevoy  
mashinnoy stantsii No.66, stantsiy Kovylnino, Kuybyshevskoy dorogi  
(for Chuvakov, Fil'kov, Lar'kin, Svyatkin, Sharifullin).  
(Railroads--Rails)

MAK, S.I.; TULENKOV, F.K.; SHTEYNBERG, L.B.; BERSHAK, V.I.; SERGEYEV, S. I.;  
GUDIMENKO, A.I.; DAVYDOV, A.M.

Exchange of experience. Zav.lab. 28 no.1:114-115 '62.

(MIRA 15:2)

1. Odesskiy politekhnicheskiy institut i Odesskiy zavod stal'nykh  
kanatov (for Mak, Tulenkov, Shteynberg). 2. Gosudarstvennyy  
nauchno-issledovatel'skiy institut tsvetnykh metallov (for  
Bershak, Gudimenko, Davydov).  
(Testing machines)

GUL'DIN, I.T.; BUZHINSKAYA, A.V.; DAVIDOV, A.M.

Simultaneous recording of thermograms and poluthermograms of electric conductance of a melt on a Vernakov pyrometer. Zhur. neorg. khim. 8 no.8:1995-1997 Ag '63. (MIRA 16:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh metallov, Moskva.  
(Fused salts—Electric properties) (Pyrometry)

GERMANYUK, M.M.; DAVYDOV, A.N.; DIKENSHTYEN, G.Kh.; KOMISSAROV, G.I.

Geology and prospects for finding oil and gas on the southern  
structures of southeastern Turkmenia. Trudy VNIGNI no.35:121-135  
'61. (MIRA 16:7)

(Turkmenistan--Petroleum geology)  
(Turkmenistan--Gas, Natural--Geology)

S/081/61/000/020/070/089  
B126/B147

AUTHORS: Morina, I. N., Vinogradova, N. P., Davydov, A. N.,  
Kornilova, N. S., Konetspol'skiy, L. I., Listopadov, M. V.,  
Starostina, Ye. S., Chernysheva, R. K., Shainskiy, Ya. B.

TITLE: Separation of acetylene from pyrolysis gases, using  
dimethyl formamide as absorbent

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 317, abstract  
20L9 (Sb. "Sintez monomerov dlya proiz-va sintetich.  
kauchuka". L., Goskhimizdat, 1960, 207-215)

TEXT: A scheme for separating concentrated  $C_2H_2$  from gases produced by  
high-temperature pyrolysis of hydrocarbons, using dimethyl formamide as  
absorbent, was developed and checked on a test unit. The optimum  
conditions for the process were established which ensure a virtually  
complete extraction of  $C_2H_2$  from pyrolysis gases and a yield of concentrate  
containing 98 to 99 % by volume of  $C_2H_2$ . [Abstracter's note: Complete  
translation.]

Card 1/1

DAVYDOV, A.N.

86-8-12/22

**AUTHOR:** Davydov, A.N., Eng.-Maj.

**TITLE:** Preparation of Radar Bombsight for Bombing (Podgotovka radiolokatsionnogo pritsela k bombometaniyu)

**PERIODICAL:** Vestnik Vozdushnogo Flota, 1957, Nr 8, pp. 60-62 (USSR)

**ABSTRACT:** In this article the author draws attention to some inadequacies in the preparation of the radar bombsight for bombing and gives some suggestions for the elimination of such inadequacies prior to the flight. The author states that at one time in their unit there were frequent cases of maladjustments and loss of calibration of the radar bombsight in the air, which caused poor results in bombing accuracy. For instance, because of systematic irregularities in the operation of frequency dividers 5 : 1 and 6 : 1, there appeared time flutter ["sektoreniye" razvertki], doubling of range marks and image, disruption of limitation of scanning [sryvy ogranicheniya razvertki] because of the maladjustment of its amplitude and duration. After a thorough investigation it was found that the systematic irregularities in the operation of the bombsight occurred because of poor preparation of the bombsight for

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86-8-12/22

Preparation of Radar Bombsight for Bombing (Cont.)

synchronous apparatus, must make corrections in the knob setting of the potentiometer "zero altitude" according to the main pulse. Because of the above mentioned measures, the extensive bomb deviations in range were eliminated. Incorrect setting of other control units may also cause irregularities in the operation of the bombsight. The experience gained by navigators had shown that the present procedure of checking and adjusting the automatic selector of the synchronous apparatus at slant ranges  $ND = 20$  km ( $H = 10$  km and  $\varphi = 60^\circ$ ) or  $ND = 28$  km ( $H = 14$  km and  $\varphi = 60^\circ$ ) lowers the efficiency of the bombsight. Actually, the slant range at which the automatic selector operates is always greater than 28 km. Therefore, the navigators in the author's unit check and adjust the change over from one condition of operation to another for  $H = 14$  km at  $\varphi = 72^\circ$ , that is, at the slant range equal to 43 km. In order to improve the bombing results, an error of  $\pm 50$  m is tolerated in the slant range. The range is calibrated at  $ND = 10$  km and  $ND = 30$  km (at  $\varphi = 0^\circ$  and  $\varphi = 70^\circ$ ), and it is mandatory to check at  $ND = 20, 16,$  and  $14$  km ( $\varphi$  is equal to  $60^\circ, 50^\circ,$  and  $40^\circ$ , respectively).

Card 3/4

DAVYDOV, A. N.

AUTHORS: Rogovin, Z. A., Davydov, A. N., Tsarfin, Ya. A. 64-1-4/19  
Morozova, N. V. Yerokhina, V. G.

TITLE: Rapid Method for the Acetylation of Cellulose in a Homogeneous Medium  
(Bystryy metod atsetilirovaniya tsellyulozy v gomogennoy srede)

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 1, pp. 17-20 (USSR).

ABSTRACT: The cellulose acetylations which have hitherto been carried out in plants took from 8 - 12 hours. Therefore it was necessary to find a method of shorter duration. In the present paper a rapid method is suggested which refers among other things to some proposals of Thomas (reference 3) as being superfluous, so e. g. a pretreatment of cellulose with concentrated urea solution. The usual activation with glacial acetic acid at 60°C for 30 minutes is sufficient. Investigations of the influence of the acetylation temperature showed that a temperature of 70°C is not to be surpassed and that with a quantity of 0,3 percentages by weight of sulfuric acid as catalyst at 80°C the triacetylcellulose can be obtained within from 20 - 30 minutes. In order to obtain

Card 1/3

Rapid Method for the Acetylation of Cellulose  
in a Homogeneous Medium

64-1-4/19

triacetylcellulose with sufficiently high molecular weight special attention must be paid to the composition of the mixture to be acetylated. Experimental results show that the decomposition of the obtained acetylcellulose is proportional to the added quantity of acetic acid, on the other hand, however, the procedure becomes too expensive in the case of an increase' addition of acetic anhydride, except the product is isolated in an arid medium so that no hydrolysis of the anhydride can occur. On the strength of various investigations a mixture of 50 - 60% of acetic anhydride and of 50 - 40% of acetic acid was found to be the optimum condition. In investigations of the catalyst quantity and its character it was found that the quantity must be reduced at increased temperature (from 1 - 1.5% to 0.3% in the case of sulfuric acid), aniline sulfate (0.6 percentages by weight) is assumed to be a better catalyst than the ammonium sulfate suggested by Thomas. The investigations are carried on in order to test them in the industrial scale and to obtain a further reduction of the acetic anhydride quantity.

Card 2/3

There are 3 tables, and 3 references, 2 of which are Slavic.

Rapid Method for the Acetylation of Cellulose  
in a Homogeneous Medium

64-1-4/19

ASSOCIATION: Laboratory of the NIIPP at the Chemical Plant, Vladimir  
(Laboratoriya NIIPP na Vladimirskom khimicheskome zavode)

AVAILABLE: Library of Congress.

1. Cellulose-Acetylation

Card 3/3



DAVIDOV, A.N.; KIRIYENKO, G.I.; PILIP, Ya.A.

New data on the geological structure of the Kushka region. Izv.  
AN Turk. SSR. Ser. fiz.-tekh., khim. i geol.nauk no.6:53-59 '63.  
(MIRA 18:1)

DAVIDOV, Aleksandr Pavlovich; SMOLIAROV, L.G., red.; ZABRODINA, A.A., tekhn.  
red.

[Rubber bearings for hydraulic turbines] Rezinovye podshipniki dlia  
gidroturbin. Moskva, Gos. energ. izd-vo, 1958. 130 p. (MIRA 11:9)  
(Bearings (Machinery)) (Hydraulic turbines)

DAVIDOV, Aleksey Petrovich; KATSNEL'SON, S.M., red.; ATROSHCHENKO, L.Ye.,  
tekh.n.red.

[Inventors and efficiency promoters are fighters for technological progress] Izobretateli i ratsionalizatory - bortsy za tekhnicheskii progress. Moskva, Izd-vo "Znanie," 1960. 47 p. (Vsesoiuznoe obshchestvo po rasprostraneniю politicheskikh i nauchnykh znaniy. Ser.5, Sel'skoe khoziaistvo, no.14).

(MIRA 13:7)

1. Nachal'nik otдела izobretatel'stva i ratsionalizatsii Ministerstva sel'skogo khozyaystva SSSR (for Davydov).  
(Agricultural machinery)

BOYKO, A.A., red.; DAVIDOV, A.P., red.; POLYAKOV, A.A., prof., red.;  
SOKOLOVA, L.M., vetvrach, red.; YARNYKH, V.S., kand. veteri-  
narnykh nauk, red.; KULICHENKO, V.S., red.; MALOVA, L.I., red.;  
PRICHENKIN, I.V., tekhn. red.

[Invention and innovation in veterinary medicine; materials of  
the First All-Union Conference, 1958] Izobretatel'stvo i ra-  
tsionalizatsiya v veterinarii; materialy Vsesoyuznogo sove-  
shchaniya izobretatelei i ratsionalizatorov v oblasti veteri-  
narii. 1st, 1958. Moskva, Izd-vo M-va sel'khoz. SSSR, 1960.  
188 p. (MIRA 14:5)

1. Vsesoyuznoye soveshchaniye izobretateley i ratsionalizato-  
rov v oblasti veterinarii. 1st, 1958. 2. Nachal'nik Glavnogo  
upravleniya veterinarii, chlen kollegii Ministerstva sel'sko-  
go khozyaystva SSSR (for Boyko) 3. Nachal'nik otдела po izo-  
bretatel'stvu i ratsionalizatsii Ministerstva sel'skogo kho-  
zyaystva SSSR. (for Davydov). 4. Direktor Vsesoyuznogo  
nauchno-issledovatel'skogo instituta veterinarnoy sanitarii  
(for Polyakov). 5. Glavnoye upravleniye veterinarii Mini-  
sterstva sel'skogo khozyaystva SSSR (for Sokolova). 6. Za-  
veduyushchiy laboratoriyey mekhanizatsii Vsesoyuznogo nauchno-  
issledovatel'skogo instituta veterinarnoy sanitarii (for Yar-  
nykh) (Veterinary medicine--Congresses)  
(Veterinary instruments and apparatus)

*Davydov, A.S.*

Subject : USSR/Electricity AID P - 1168  
Card 1/1 Pub. 29 - 21/31  
Author : Davydov, A. S.  
Title : ~~Protecting locomobile boilers from scale formation~~  
(Letters from readers)  
Periodical : Energetik, 11, 34, N 1954.  
Abstract : In reply to a question from a reader, the author briefly  
enumerates methods of preventing scale formation.  
Institution : None  
Submitted : No date

DAVYDOV, A. S.

AID P - 1175

Subject : USSR/Electricity  
Card 1/1 Pub. 29 - 28/31  
Author : Davydov, A. S.  
Title : Measures of preventing the tightness of fitting fire-tubes of locomobile boilers. (Letters from readers)  
Periodical : Energetik, 11, 37-38, N 1954  
Abstract : In reply to a question from a reader, the author gives a brief explanation of causes of damage to fire-tube boilers and enumerates methods of prevention.  
Institution : None  
Submitted : No date

DAVYDOV, A.S.

Life of fire tubes in the locomobile boiler. Energetik 4 no.6:  
39 Je '56. (MLRA 9:8)

(Boilers)

DAVIDOV, A.S.

Cleaning the fire tubes of a steam engine. Energetik 4 no.9:38 S '56.  
(Steam engines) (MIRA 9:10)

DAVIDOV, A.S., inzh.; TVERITINOV, A.Ye., inzh.

Stationary 160 hp diesel generator. Mekh. i elek.sots.sel'khoz.  
no.5:41-44 '56.

(MIRA 12:4)

1. Ministerstvo sel'skogo khozyaystva SSSR.  
(Electric generators)

DAVIDOV, A.S.

DAVIDOV, A.S.

Joint operation of locomobiles. Energetik 5 no.5:37-38 My '57.  
(Electric power plants) (MLBA 10:6)

DAVYDOV, A.S.

AUTHOR

DAVYDOV, A.S.

12-7-3/26

TITLE

The Electric Contact **Machining** of Metals.

(Elektrokontaktnaya obrabotka metallov -Russian)

PERIODICAL

Stanki i Instrument, 1957, Vol 28, Nr 7, pp 6 - 9 (U.S.S.R.)

ABSTRACT

According to the kind of action of the electric current on the workpiece to be worked on and depending upon the form of energy which characterizes the metal decrease, the electric methods of working can be divided into electro-mechanical, electric erosion, electric erosion-chemical- and electro-chemical methods. (Illustration 1). Similarly, the methods can be divided into several groups according to the type of current impulse production. The further description deals with all types of electro erosion working with mechanical impulse generation, which are counted by the author among the electrocontact working processes. Electric contact working can be carried out by means of direct current as well as by alternating current, though, on account of its simplicity, alternating current is preferred. Exact limits of the current voltages are difficult to determined, as they depend upon a whole series of causes: on the thermal-physical properties of the metal or its alloys, heat transition, the presence of pressure between the tool and the work piece, etc. Electric contact working can be carried out at pressures of up to 10-15 kg/cm<sup>2</sup> as well as with pressure up to 2 kg/cm<sup>2</sup> and practically also without pressure at all when using of the method of electric remelting. Within the zone of wor-

Card 1/2

DAVIDOV, A.S., inzh.

Blades of a new design for hole drills. Mekh. stroi. 17 no.10:26  
0 '60. (MIRA 13:10)

(Boring machinery)

DAVYDOV, A.S.

Collective excitations and the deformability of atomic  
nuclei. Izv. AN SSSR. Ser. fiz. 28 no.10:1578-1598 O '64.  
(MIRA 17:12)

1. Kafedra kvantovoy teorii Moskovskogo gosudarstvennogo  
universiteta.

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MISSION NR: AP4040773

S/0121/64/000/006/0020/0023

AUTHOR: Davy\*dov, A. S.

TITLE: Construction and design of machines for electrocontact machining of metals

SOURCE: Stanki i instrument, <sup>35-</sup>no. 6, 1964, 20-23

TECH TAGS: electrocontact machining, metal machining, feed mechanism, transformer, specific electric resistance

ABSTRACT: An apparatus with tangential feed for electrocontact machining of metals is presented and shown schematically in Fig. 1 on the Enclosure. Here (1) is a step-down transformer, (2) a current conductor, (3) a contact terminal, (4) a brush, (5) an electrode, (6) the object to be machined. The rate of removal of the metal, the nominal power  $P_1$ , the total power  $S_1$ , and the specific energy consumption  $S_2$  are correlated by the equations:  $P_1 = e \cdot v$ ,  

$$S_2 = \frac{P_1}{\cos \varphi_1}$$

The active resistance of the electrode part of the network is given by  $R = m_0 \rho \frac{l}{q}$ ,

where  $m_0$  is the coefficient of skin effect,  $\rho$  the specific resistance at the

ACCESSION NR: AP4040773

working temperature, and  $l$  and  $q$  are the length and the cross-sectional area of the material. The coefficient of stability for such a system was worked out to be of the order of 1.85. Orig. art. has: 27 equations, 3 figures, and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SYS CODE: MM

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OTHER: 000

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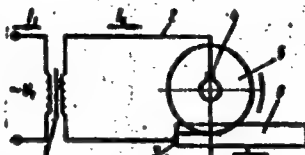


Fig. 1. Schematic drawing showing the machining of an object, with tangential feed of the disk.

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L 34166-65 EWT(m) Feb DIAAP

ACCESSION NR: AP5005150

S/0189/65/000/001/0064/0077

AUTHOR: Davydov, A. S.; Rostovskiy, V. S.

17  
16  
B

TITLE: Electric monopole transitions in nonspherical atomic nuclei

SOURCE: Moscow. Universitet. Vestnik. Seriya 3. Fizika, astronomiya, no. 1, 1965, 64-77

TOPIC TAGS: monopole transition, quadrupole transition, electric transition, nonspherical nucleus, energy level, wave function, excited state

ABSTRACT: The purpose of the investigation was to calculate the energy levels, the wave functions, and the probabilities of E0 and E2 transitions, for nonspherical even-even atomic nuclei which have axial symmetry in the ground state, with full accounting for the interconnection between collective excitations of different types. It is shown that the wave functions and the relative energies of the excited states, when complete account is taken of the interaction between the rotation and the beta and gamma oscillations, can be expressed in terms of two parameters which characterize the amplitudes of the zero-point beta and gamma

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L 34166-65

ACCESSION NR: AP5005150

oscillations of the surface of the nucleus. The relative probabilities of the E0 and E2 transitions are calculated as functions of these parameters. The theoretical results are compared with experiment for a number of nuclei. Orig. art. has: 1 figure, 34 formulas, and 2 tables.

ASSOCIATION: Kafedra elektrodinamiki i kvantovoy teorii, Moskovskogo universiteta  
(Department of Electrodynamics and Quantum Theory, Moscow University)

SUBMITTED: 12Feb64

ENCL: 00

SUB CODE: GP

NR REF SOV: 005

OTHER: 020

Card 2/2

DAVYDOV, A.S., akademik; OVCHARENKO, V.I.

Electric quadrupole transitions between rotary states with large spins in even nuclei. Dokl. AN SSSR 163 no.2:329-331 J1 '65.  
(MIRA 18:7)

1. Institut fiziki AN UkrSSR. 2. AN UkrSSR (for Davydov).

DAVYDOV, A.S.; ULITIN, M.N.

State of and prospects for the use of electrophysical methods in working metals. Trakt. i sel'khoz mash. no.9:45-47 S '65.

(MIRA 18:10)

1. Nauchno-issledovatel'skiy institut tekhnologii traktornogo i sel'skokhozyaystvennogo mashinostroyeniya.

L 38670-66 EWT(m)/EWP(t)/ETI/EWP(k) IJP(q) JD

ACC NR: AP6016739

SOURCE CODE: UR/0121/66/000/001/0010/0012

AUTHOR: Davydov, A. S.

ORG: None

TITLE: Electric contact broaching 19

SOURCE: Stanki i instrument, no. 1, 1966, 10-20

TOPIC TAGS: metal broaching, electric metal finishing, stainless steel

ABSTRACT: A method is proposed for using electric current through a fixed electrode to dress sprues and to machine blind and through holes in steel components. A diagram of the system is shown in the figure. An installation based on this principle was tested with a 95 kva step-down transformer having a primary voltage of 380 v and a secondary voltage of 31.5-42 v. It was found that a carbon electrode is practical for this method. Machining was done at an electrode voltage of 12-22.8 v. In some cases a stationary electric arc was observed at voltages close to the upper limit

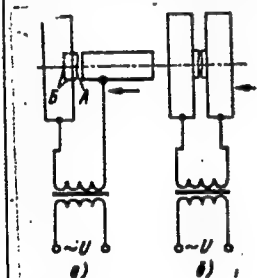


Fig. 1. a--dressing a sprue and machining a blind hole with a carbon electrode; b--mutual machining of two sprues. A--surface to be machined; B--finished surfaces.

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UDC: 621.9.018.5

L 38670-66

ACC NR: AP6016739

causing localized depressions in the part being machined. The finished surface has a wavy appearance with a wave height of  $\pm 1.0$  mm. It was also found that the hardness of the heat-affected zone may be reduced to normal by annealing. The relative weight loss for the electrode is 2%. Electrical contact broaching using a carbon electrode may be used for dressing the sprues on castings or ingots of stainless and high-temperature steel which may be machined only with extreme difficulty by other methods. Industrial application of the new technological process requires refinement and expansion of the limits for operational conditions established by laboratory and industrial tests. Orig. art. has: 5 figures, 2 tables.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 012/ OTH REF: 000

Cord 2/2 vmb

ACC NR: AP7002383

SOURCE CODE: UR/0020/66/171/005/1069/1071

AUTHOR: Davydov, A. S. (Academician AN UkrSSR); Myasnikov, E. N.

ORG: Institute of Physics, Academy of Sciences, UkrSSR (Institut fiziki Akademii nauk UkrSSR)

TITLE: Absorption and dispersion of light upon formation of molecular excitons

SOURCE: AN SSSR. Doklady, v. 171, no. 5, 1966, 1069-1071

TOPIC TAGS: exciton absorption, light absorption, light dispersion, Green function, phonon interaction, refractive index, dielectric constant

ABSTRACT: The authors investigated by the method of temperature retarded Green's functions the shape of the absorption bands and the dispersion of light when excitons are produced in three-dimensional crystals. Account is taken of the interaction with the acoustical and optical phonons. An expression is derived for the dielectric tensor in the region of exciton-absorption frequencies, and the components of this tensor are plotted for different temperatures. The dispersion of the refractive index and of the attenuation coefficient are then determined. The results show that at low temperatures the absorption (the imaginary part of the dielectric constant) has a sharp maximum with a slight structure on the high-frequency side. With increasing temperature, the height of the principal maximum drops and the absorption on the high-frequency side of the principal maximum broadens and becomes more intense. When the interaction with the acoustic phonons is slight, the half-width of the prin-

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UDC: 545.342.2

ACC NR: AP7002383

cipal maximum depends on the number of optical phonons present at the given temperature. With increasing interaction with the acoustic phonons, the short-wave part of the principal maximum broadens and becomes more asymmetric. The results are compared with those obtained by others. Orig. art. has: 2 figures and 7 formulas.

SUB CODE: 20/ SUBM DATE: 09Sep66/ ORIG REF: 002/ OTH REF: 004

Card 2/2

3

C A

Calculation of the coefficient of internal conversion.  
A. S. Davydov. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 10,  
666-73 (1940).—Theoretical-math. A generalized theorem  
for the influence of orbital electrons on the emission  
probability is obtained. For wave lengths of γ-rays  
greater than the electron-nucleus distance, interaction  
almost completely compensates for the decreased energy of  
irradiation due to conversion. The compensation is  
greater the greater the order of the multipoles.  
F. H. Rathmanu

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